

REMARKS

Claims 1, 2 and 4-17 are pending in this application. By this Amendment, claim 1 is amended, and new claim 17 is added .

No new matter is added to the application by this Amendment. Support for new claim 17 and the features added to claim 1 can be found in Figs. 1-3 of the present application.

Reconsideration of the application is respectfully requested.

I. Rejections Under 35 USC 103

A. Lawrence et al. in view of Castelas et al.

Claims 1, 2, 4, 5, 9 and 11-16 were rejected under 35 USC 103(a) as allegedly being unpatentable over U.S. Patent No. 5,958,243 to Lawrence et al. (hereinafter “Lawrence”) in view of FR 2586202 to Castelas et al. (hereinafter “Castelas”). The rejection is respectfully traversed.

Prior to discussing the merits of the Examiner's position, the undersigned reminds the Examiner that the determination of obviousness under § 103(a) requires consideration of the factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1 [148 USPQ 459] (1966): (1) the scope and content of the prior art; (2) the differences between the claims and the prior art; (3) the level of ordinary skill in the pertinent art; and (4) secondary considerations, if any, of nonobviousness. *McNeil-PPC, Inc. v. L. Perrigo Co.*, 337 F.3d 1362, 1368, 67 USPQ2d 1649, 1653 (Fed. Cir. 2003). There must be some suggestion, teaching, or motivation arising from what the prior art would have taught a person of ordinary skill in the field of the invention to make the proposed changes to the reference. *In re Fine*, 837 F.2d 1071, 1075, 5 USPQ2d 1596, 1600 (Fed.

Cir. 1988). But see also *KSR International Co. v. Teleflex Inc.*, 82 USPQ2D 1385 (U.S. 2007).

A methodology for the analysis of obviousness was set out in *In re Kotzab*, 217 F.3d 1365, 1369-70, 55 USPQ2d 1313, 1316-17 (Fed. Cir. 2000) A critical step in analyzing the patentability of claims pursuant to section 103(a) is casting the mind back to the time of invention, to consider the thinking of one of ordinary skill in the art, guided only by the prior art references and the then-accepted wisdom in the field. Close adherence to this methodology is especially important in cases where the very ease with which the invention can be understood may prompt one "to fall victim to the insidious effect of a hindsight syndrome wherein that which only the invention taught is used against its teacher."

It must also be shown that one having ordinary skill in the art would reasonably have expected any proposed changes to a prior art reference would have been successful. *Amgen, Inc. v. Chugai Pharmaceutical Co.*, 927 F.2d 1200, 1207, 18 USPQ2d 1016, 1022 (Fed. Cir. 1991); *In re O'Farrell*, 853 F.2d 894, 903-04, 7 USPQ2d 1673, 1681 (Fed. Cir. 1988); *In re Clinton*, 527 F.2d 1226, 1228, 188 USPQ 365, 367 (CCPA 1976). "Both the suggestion and the expectation of success must be founded in the prior art, not in the applicant's disclosure." *In re Dow Chem. Co.*, 837 F.2d 469, 473, 5 USPQ2d 1529, 1531 (Fed. Cir. 1988).

The Patent Office acknowledges that Lawrence fails to teach or suggest a controller adapted to operate the shut-off valve at a high frequency. The Patent Office introduces Castelas as allegedly remedying the deficiencies of Lawrence by allegedly teaching a process having a filter 1, shut-off valve 7 and a controller 14 adapted to operate the shut-off valve as shown in Fig. 1 of Castelas. The Patent Office alleges that it would have been obvious to provide the shut-off

valve disclosed by Lawrence with a controller, as taught by Castelas, in order to automatically operate the valve and since the court held that broadly providing an automatic or mechanical means to replace a manual activity which accomplished the same result is not sufficient to distinguish over the prior art. Applicants respectfully disagree with the allegations by the Patent Office.

Lawrence and Castelas, taken singly or in combination, does not teach or suggest at least one permeate circulation circuit having a length defined between a first end and a second end located opposite to the first end, wherein the first end of the at least one permeate circulation circuit is connected, via an inlet, to the permeate discharge pipe at a point downstream of the shut-off valve of the permeate discharge pipe as required by amended claim 1. Moreover, the Lawrence and Castelas, taken singly or in combination, fail to teach or suggest that the permeate buffer comprises a permeate buffer tank located at a point downstream of the shut-off valve in the permeate discharge pipe as required by amended claim 5.

In the Office Action, the Patent Office alleges that Lawrence teaches (i) a shut-off valve 9 that is provided in the permeate discharge pipe, (ii) a permeate circulation pump 15 provided in the permeate circulation circuit, and (iii) a permeate buffer 19 in the permeate circulation configured to feed the permeate circulation pump 15 during the closed condition of the shut-off valve 9. Thus, it appears that the Patent Office is alleging that Lawrence's alleged permeate discharge pipe extends from the permeate chamber 5 downward (including valves 9, 11, permeate storage tank 10, and pump 15) to valve 18 and that Lawrence's alleged permeate circulation circuit extends from the permeate chamber 5 downward (including valves 12, 13,

clean-in-place tank 19, pump 15, valve 14) back to the permeate chamber 5 as shown below in a diagram of FIG. 3 of Lawrence.

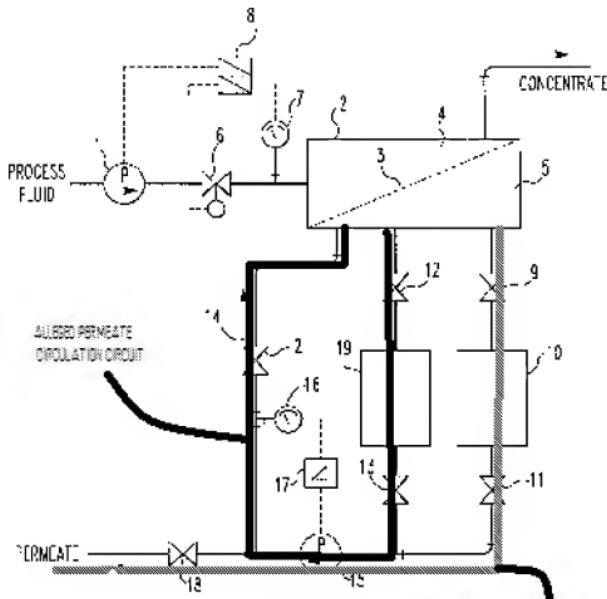


FIG. 3

Both first and second ends of Lawrence's alleged permeate circulation circuit are directly connected to the permeate chamber 15 (shown as the dark black lines above). Additionally, Lawrence's pump 15 is located within both Lawrence's alleged permeate circulation circuit and permeate discharge pipe (shown as the light gray lines above). Further, Lawrence's alleged

permeate circulation circuit utilizes or is the same pipe as Lawrence's alleged permeate discharge pipe. Thus, Lawrence's alleged permeate circulation circuit is not separate and independent from Lawrence's alleged permeate discharge pipe.

Therefore, Lawrence's first end of the alleged permeate circulation circuit is not connect to a permeate discharge pipe at a point downstream of the shut-off valve as required by the amended claim 1. Moreover, Lawrence's alleged permeate buffer 19 in the alleged permeate circulation circuit is not located downstream of the shut-off valve in the alleged permeate discharge pipe as required by amended claim 5.

Because the features of independent claim 1 are neither taught nor suggested by Lawrence and Castelas, taken singly or in combination, these references would not have rendered obvious, the features specifically defined in claim 1 and its dependent claims.

For at least these reasons, claims 1, 2, 4, 5, 9 and 11-16 are non-obvious in view of Lawrence and Castelas. Reconsideration and withdrawal of the rejection of the claims under 35 USC 103(a) are respectfully requested.

B. Lawrence and Castelas in view of Storkebaum et al.

Claims 6-8 and 10 were rejected under 35 USC 103(a) as allegedly being unpatentable over Lawrence and Castelas in view of U.S. Patent No. 4,749,476 to Storkebaum et al. (hereinafter "Storkebaum"). The rejection is respectfully traversed.

Storkebaum does not remedy the deficiencies of Lawrence and Castelas as described above with respect to claim 1, from which claims 6-8 and 10 directly or indirectly depend. Thus,

Lawrence, Castelas and Storkebaum, taken singly or in combination, do not teach or suggest at least one permeate circulation circuit having a length defined between a first end and a second end located opposite to the first end, wherein the first end of the at least one permeate circulation circuit is connected, via an inlet, to the permeate discharge pipe at a point downstream of the shut-off valve of the permeate discharge pipe as recited in claim 1.

Because these features of independent claim 1 are not taught or suggested by Lawrence, Castelas and Storkebaum, taken singly or in combination, these references would not have rendered the features of claim 1 and its dependent claims obvious to one of ordinary skill in the art.

For at least these reasons, claims 6-8 and 10 are patentable over Lawrence, Castelas and Storkebaum. Thus, withdrawal of the rejection under 35 USC 103(a) is respectfully requested.

II. New Claim

Applicants take this opportunity to submit that new claim 17 is also not anticipated and/or rendered obvious in view of the teachings of the cited references.

The cited references, taken singly or in combination, do not teach or suggest at least one permeate circulation circuit which is, on the one side, connected, by an inlet, to the permeate discharge pipe at a point downstream of the shut-off valve of the permeate discharge pipe and, on the other side, by an outlet, to the permeate side of the filter housing, wherein the at least one permeate circulation circuit is separate and independent from permeate discharge pipe as required by new claim 17.

For at least these reasons, new claim 17 is not anticipated by and is patentable over the cited references.

III. Conclusion

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1, 2 and 4-17 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Early and favorable action is earnestly solicited.

CONDITIONAL PETITION FOR EXTENSION OF TIME

If entry and consideration of the amendments above requires an extension of time, Applicants respectfully request that this be considered a petition therefor. The Commissioner is authorized to charge any fee(s) due in this connection to Deposit Account No. 14-1263.

ADDITIONAL FEE

Please charge any insufficiency of fees, or credit any excess, to Deposit Account No. 14-1263.

Respectfully submitted,
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